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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/776,575

02/11/2004

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Poly-55-2APP

2792

26479

7590

07/16/2007

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EXAMINER

HO, DUC CHI

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

07/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/776,575

Applicant(s)

CHAO ET AL.

Examiner

Duc C. Ho

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 22, 31, 32, 37, 46, 55 and 56 is/are rejected.
- 7) ☒ Claim(s) 14-21, 23-30, 33-36, 38-45, 47-54, and 57-60 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Drawings

1. Figures 3A-3E, and 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 32, and 56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 32 recites the limitation "wherein the act of determining whether or not to forward the cell from the first device to the second device is determined periodically for a head of line cell in each of the plurality of destination output queues" in lines 4-7. There isn't

adequate support for this limitation in the specification. The same remark applies to claim 56.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-13, 22, 31-32, 37, 46, and 55-56 are rejected under 35 U.S.C. 102(b) as being anticipated by the admitted prior art in figures 3A-3E, and in pages 11-14 of the instant application, hereinafter referred to as the APA.

Regarding claim 1, the APA illustrates an input-buffered SM-fig. 3E. The SM 330-fig. 3E includes a plurality of N (N=63) input links, and a plurality of M output links. The SM 330-fig.3E includes a plurality of buffers 380a-b, each of the buffers shared by queues corresponding to each of the M (M=63) output links, and each of the buffers associated with a particular one of the input links.

Regarding claim 2, since the SM330-fig.3E could be used to deliver unicast and multicast data, each of the buffers 310-fig.3A could be further shared by a multicast queue.

Regarding claim 3, each of the buffers 310-fig.3A can receive at most one cell per time slot, see [0024].

Regarding claims 4, and 7, the APA in fig. 3E discloses that the buffer size could be as small as 15 cells, which is smaller than $M=63$, see [0039].

Regarding claims 5, and 8, the APA in fig. 3E discloses that the buffer size could be as small as 15 cells, which is smaller than $M/2$ or $63/2$, see [0039].

Regarding claim 6, the SM320-fig.3E support P ($P=2$) priority levels, and the number of buffers is $P*N$ or $2*63$.

Regarding claim 9, the buffer could be adapted to read or send, at most, M cells per time slot, see [0037].

Regarding claim 10, the buffer could have a read speed at 1.6 nsec that is less than 6.2 nsec, see [0037].

Regarding claim 11, the average number of reads from a buffer should be the same at the output link utilization, because the number of buffers and the number of output links is the same.

Regarding claim 12, the APA discloses that before forwarding any data cell over the link to a destination buffer of a receiver, in which the buffer space inherently includes a plurality of sub spaces or queues, the sender first needs to receive credits for the VC via credit cells sent by the receiver. After having receive credits by a counter maintained by the sender, see [0043-0044] (corresponding to maintaining a cell count associated with each of the destination queues of the second device), the sender is eligible to forward a data cell (corresponding to determining whether or not to forward the cell from the first device to the second device using the cell count associated with

the one of the X destination queues of the second device corresponding to the determined destination of the cell).

Regarding claim 13, the APA should preformed for each of the at least one communication links independently.

Regarding claim 22, as stated in claim 12, the sub queues or the destination queues of the receiver share a common buffer memory.

Regarding claim 31, in the APA the sender should be an upstream switch and the receiver should be a downstream switch module.

Regarding claim 32, the system disclosed in the APA is capable of determining whether or not to forward the cell periodically based on a head of line cell in each of the sub queues.

Regarding claims 37, 46, 55-56, these claims have similar limitations as claims 12, 22, 31-32, respectively. Therefore, they are rejected under the APA for the same reasons set forth in the rejection of claims 12, 22, 31-32.

Allowable subject matter

5. Claims 14-21, 23-30, 33-36, 38-45, 47-54, and 57-60 are objected to as being independent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

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6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nong (US 7,154,885); Dell et al.(US 2002/0085578) are cited to show switch module memory structure and per-destination queue flow control for use in a switch, which is considered pertinent to the claimed invention.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (571) 272-3147. The examiner can normally be reached on Monday through Thursday from 7:30 am to 6:00 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on (571) 272-2988.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (571) 272-3147. The examiner can normally be reached on Monday through Thursday from 7:30 am to 6:00 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on (571) 272-2988.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

A handwritten signature in black ink, appearing to read "Duc Ho", written over the printed name.

Duc Ho

06-29-07